COMMENTS ON THE REQUIREMENT FOR 8-HOUR HOLDING TIME FOR HETEROTROPHIC PLATE COUNT (HPC) BACTERIA

Under 40 CFR Part 141.74, there are two approved methods for HPC analysis: Pour Plate and SimPlate. In regard to elapsed time between sample collection and analysis, Standard Methods has a recommended maximum of 8 hrs and a maximum of 24 hrs with certain criteria to be met. Part 141.74 specifies a maximum of 8 hrs with certain criteria to be met. The language contained in Standard Methods and Part 141.74 is shown below.

Approved Methods for HPC Analysis Under the SWTR

- Pour Plate Method (9215 B) from the 18th, 19th, or 20th edition of Standard Methods.
- SimPlate Method by IDEXX Laboratories, Inc.

Standard Methods, 19th edition, page 9-32

> "Collect water as directed in Section 9060A. Initiate analysis as soon as possible after collection to minimize changes in bacterial population. The recommended maximum elapsed time between collection and analysis of samples is 8 h (maximum transit time 6 h, maximum processing time 2 h). When analysis cannot begin within 8 h, maintain sample at a temperature below 4°C but do not freeze. Maximum elapsed time between collection and analysis must not exceed 24 h."

40 CFR Part 141.74, Table of Approved Methods for Organisms, Footnote 2

> "The time from sample collection to initiation of analysis may not exceed 8 hours. Systems must hold samples below 10°C during transit."

ADDITIONAL CLARIFICATION

To make sure that all this is clear, we want to emphasize that this 8-hr holding time is applicable only to samples collected under the requirements in CFR 141.74 in which the HPC analysis is used to demonstrate a disinfectant residual. AND there is a provision for site-specific determinations to be made if transport is difficult (see the second paragraph here):

> "141.74(c)(3)(i) The residual disinfectant concentration must be measured at least at the same points in the distribution system and at the same time as total coliforms are sampled, as specified in Sec. 141.21, except that the State may allow a public water system which uses both a surface water source or a ground water source under direct influence of surface water, and a ground water source to take disinfectant residual samples at points other than the total coliform sampling points if the State determines that such points are more representative of treated (disinfected) water quality within the distribution system. Heterotrophic bacteria, measured as heterotrophic plate count (HPC) as specified in paragraph (a)(3) of this section, may be measured in lieu of residual disinfectant concentration.
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> "(ii) If the State determines, based on site-specific considerations, that a system has no means for having a sample transported and analyzed for HPC by a certified laboratory under the requisite time and temperature conditions specified by paragraph (a)(3) of this section and that the system is providing adequate disinfection in the distribution system, the requirements of paragraph (c)(3)(i) of this section do not apply to that system."

http://a257.g.akamaitech.net/7/257/2422/14mar20010800/edocket.access.gpo.gov/cfr_2002/julqtr/40cfr141.74.htm

For HPC samples collected for other reasons, the following is included:

> "Therefore, we suggest that staff recommend that water systems minimize the holding times whenever possible, with 8 hrs max a goal, and accept without any qualifications results from samples held for the period allowed by the analytical method used."